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Sustainability and COVID-19

UN Definitions and the Coronavirus Corpus

Abstract

This essay pursues the following aims: firstly, UN definitions of sustainability are analysed to see how the concept is framed in international discourse; secondly, the institutional connection between COVID-19 and the UN's Sustainable Development Goals (SDGs) is analysed; lastly, the online Coronavirus Corpus is interrogated in order to establish whether online news outlets from twenty English-speaking countries show textual evidence of the institutional connection between COVID-19 and sustainability, and whether the semantics of sustainability in the press correspond to the UN's. In the analysis, emphasis is laid on the co-occurrence of a set of multi-word expressions, combinations of sustainable, sustainability, and COVID-19.

Keywords: *COVID-19, Coronavirus Corpus, corpus analysis, definitions, sustainable development*

The EEA (the European Environment Agency) has dubbed COVID-19 “a ‘late lesson’ from an early warning” (Strand et al. 2021). That is to say, the connection between environmental degradation and the risk of emerging pathogens was drawn long before Wuhan in 2019. Since HIV in the early 1980s, the issue of emerging viruses has received sustained attention. In 2016, for instance, during the Zika epidemic “specialists argued that the increasingly frequent appearance of novel pathogens was the result of radical transformations in the relationship between humans and their environments” (Lakoff 2017, 5). Examples of this include “the disturbance of previously isolated ecosystems, increasing population density in urban slums, the rapid global circulation of people, the industrialisation of food and agricultural production systems, and the overuse of antibiotics in clinics and livestock facilities” (Lakoff 2017, 5). COVID-19 has thus unsurprisingly renewed scholarly and socio-political awareness of the relationship between emerging pathogens and environmental degradation. It has also laid bare the sheer unpreparedness of traditional public health facilities and measures. More than that, COVID-19 has pushed the debate on sustainability back to the fore of institutional and public discussion.

In this essay, COVID-19 is referred to as a syndemic, rather than a pandemic or an epidemic. A term originally coined by medical anthropologist Merrill Singer, a syndemic goes beyond “the notion of disease clustering in a location or population, and processes of biological synergism among co-dwelling pathogens,” because it “points to the determinant importance of social conditions in the health of individuals and population” (Singer 2003, 428). Singer also notes that the “sociopolitical context of sufferers’ health is critical” (2003, 428); in other words, syndemics “are most likely to emerge under conditions of health inequality caused by poverty, stigmatisation, stress, or structural violence because of the role of these factors in disease clustering and exposure and in increased physical and behavioural vulnerability” (2017, 941). Furthermore, the connection between COVID-19 and the notion of syndemic has recently been drawn.¹

The recognition of COVID-19 as a syndemic and the recognition of the inextricable connection between environmental degradation and the onset of emerging viruses see COVID-19 at the core of sustainability discourses and the implementation of sustainable policies. Based on these remarks and the current institutional interest in the relationship between COVID-19 and sustainability, this essay presents an analysis in three steps. Firstly, UN definitions of sustainability are interrogated in order to assess how the syndemic is currently framed in international discourse. Secondly, the institutional connection between COVID-19 and the UN’s Sustainable Development Goals (SDGs) is analysed. Lastly, the online Coronavirus Corpus² is interrogated in order to establish whether online news outlets from twenty English-speaking countries show textual evidence of the institutional connection between COVID-19 and sustainability, and whether the semantics of sustainability in the press correspond to the UN’s. In the analysis, special attention is paid to the co-occurrence of a set of multi-word expressions.

1. Sustainability and COVID-19: The UN’s Perspective

Definitions of sustainability abound, to the point where some scholars have argued that, on the one hand, the term “lacks solid meaning” (Farley and Smith 2014; Thiele 2013; Johnston et al. 2007; Newton and Freyfogle 2005) and, on the other, the definition is extremely ambiguous and problematic (Salazar 2018; Bartlett 2010; among others). In fact, “‘sustainability’ remains an open concept with myriad interpretations and context-specific understanding” (Purvis, Mao and

¹ Singer (2021) has also recently written on the interaction between the concept of syndemic and that of structural violence in the context of COVID-19. The notion of syndemic has also recently been connected with COVID-19 by Richard Horton (2020).

² The Coronavirus Corpus is freely available here: www.english-corpora.org/corona/. Last visited 10/10/2022.

Robinson 2017, 681). This article presents the definitions given by the United Nations. Having recourse to an authoritative supranational institution serves the purpose of identifying a hegemonic view of sustainability which necessarily orients both widespread understandings of the concept and the implementation of specific policies in a considerable number of countries around the globe. The question of definition is therefore not absolute, but relative in this case: what is sustainability according to the UN?

Defining sustainability entails some difficulties, both in terms of logic and lexicography. Firstly, describing a concept at an institutional level usually involves prescription (Ramsey 2015, 1077): since definitions—at least in a denotational or referential view of language (Ramsey 2015, 1077-1178)—tend to legislate both the meaning and the proper use of words, a definition of sustainability necessarily contributes to the foundation of corporate, national, and supranational policies. Secondly, definitions of sustainability tend to operationalise the term, that is, they usually entail the specification of “a set of measurable criteria such that individuals and groups [...] could agree whether the criteria are being met in a concrete development program” (Brooks, quoted in Jacobs 1999, 24). The operationalisation of sustainability causes it to become an umbrella term, and one of its most common hyponyms—sustainable development—is defined in its stead. In the institutional sources here selected, two types of definitions are collected: what Cormack calls text definitions, or definitions “given in running text or isolated within expository works” (2013, 163), and which, by their very nature, eschew the lemma-lexicographical entry subdivision and therefore grammatically conflate the *definiens* and the *definiendum*; the other type of definition is the glossary definition (terminological, in a very general sense), contained in a glossary and thus structurally distinct from the former.

1.1 The Brundtland Report and the Sustainable Development Goals: Defining Sustainability

In the institutional documents analysed here, sustainability and sustainable development appear to be conflated, confirming that “the two are so intertwined in the literature that they remain difficult to tease apart” (Purvis, Mao and Robinson 2019, 691). The definition that brought sustainability discourse into the mainstream and contributed to initiating the UN discourse on sustainability, was, in fact, a definition of sustainable development, first formalised in 1989, in the UN-commissioned Brundtland report: “[s]ustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED 1989, 8). This is a text definition and it is institutional, and, like most definitions in similar contexts, it purports to be normative (i.e. to

call to action and affect political decisions). Had this been a lexicographical definition, one primary objection would have regarded the use of lexical items that require further definitional work: what is the definition of “needs”? What is intended by “meeting needs” (i.e. which exactly are these needs? Are they contingent and contextual or permanent and universal? How are they going to be met? When are they classifiable as having been met?)? What is the definition of “development”? While it may be argued that answering these questions lies outside the scope of a definition, it can also be argued that a definition should attempt semantic self-sufficiency. Moreover, such issues are particularly relevant because this is the definition that served as the foundational frame for Western sustainability discourses.

Furthermore, within the Brundtland framework, the definition has expanded to include the so-called three pillars of sustainability. In this view, the attainment of sustainability is seen as the result of the interplay of environmental, social, and economic factors; the three-pillar framework also represents a tool for the “multidimensional understanding of the complex problems posed by the global crisis” (Salazar 2018, 52); such interplay should favour the realisation of sustainable development (Purvis, Mayo and Robinson 2019). This conceptual framework has variously been ascribed to the Brundtland report (Salazar 2018), to the post-Rio Earth Summit Agenda 21, and to the 2002 World Summit on Sustainable Development (Moldan et al. 2012). There appears to be no ur-text from which the three-pillar conceptual framework derives and its origin is somewhat taken for granted in the literature, “presented, with little or no theoretical foundation or justification, as the norm” (Purvis, Mayo, and Robinson 2019, 691). This is problematic, both epistemologically and politically, because the three-pillar framework has been identified as privileging the economy to the detriment of both social equity and environmental factors (Salazar 2018).

After the Rio Summit in 1992, the UN established a Commission on Sustainable Development (CSD), and currently defines sustainability in terms of sustainable development, and along the conceptual axis of the three-pillar framework, with, it seems, particular emphasis on socio-cultural factors. This current view, apparently more based on a “socio-ecological epistemology,” has been identified as competing with a view based on the “epistemology of progress” (Salazar 2018, 51-57).

The UN neither actively promotes nor produces terminological resources; official, sanctioned glossaries are equally rare, therefore UN definitions are mostly text definitions. One official glossary available online is the outdated (1997) “Glossary of Environment Statistics,” developed by the Statistics Division of the UN’s Department for Economic and Social Information and Policy Analysis. The glossary “covers the areas of environment statistics, environmental and

sustainable development indicators, and environmental accounting,” and the selection of terms was carried out focussing “on the requirements of environmental statisticians and environmental accountants, with some reference to the possible use of environmental data in management and policy analysis” (United Nations Statistics Division 1997). The definition of sustainability it contains reads as follows:

The concept refers to (a) use of the biosphere by present generations while maintaining its potential yield (benefit) for future generations; and/or (b) non-declining trends of economic growth and development that might be impaired by natural resource depletion and environmental degradation. (United Nations Statistics Division 1997)

Point (a) is a rewording of the Brundtland’s definition of sustainable development; while (b) openly addresses both economic growth and development, and the fact that these might be impaired by environmental degradation. Interestingly, this definition captures what Salazar has called the incongruity within UN definitions of sustainability (2018): point (a) addresses the use of the biosphere, therefore seemingly foregrounding the environmental element in sustainability discourses; in point (b) the terms ‘development’ and ‘growth’ are used together, which, on the one hand, might indicate the intention to distinguish the two concepts, which have become dangerously conflated in institutional discourses of sustainability (Purvis, Mao and Robinson 2019, 691), while, on the other hand, suggests the same definitional issues found in the Brundtland definition. What is “development” and what is “growth”? “Development” and “growth” for whom? Furthermore, the juxtaposition of the concepts in “sustainable growth” has been dubbed an oxymoron (Salazar 2018, 54).

The UN’s website on SDGs and the 2030 Agenda for Sustainable Development offers a view of sustainability that has infiltrated all policy, media, and mainstream discourses on the topic. This view is inextricably intertwined with sustainable development, whereby the semantics of ‘development’ are, again, problematic. It is through the conflation of the concepts of development and growth in sustainability discourse “that economic growth-centred ‘development’ becomes an implicit part of ‘sustainability,’ skipping over the questions: Development of what? Development for whom?” (Purvis, Mao and Robinson 2019, 691). Such strategic ambiguity creates a fuzzy, potentially manipulable concept, which continues to be overrun by the neoliberal capitalistic reading of the three-pillar framework.

The 17 Sustainable Development Goals (SDGs) “form the framework for improving the lives of populations around the world and mitigating the hazardous man-made effects of climate change” (United Nations Academic Impact 2022). The three pillars of sustainability constitute the SDGs’ theoretical foundation, implying that “development must balance social, economic

and environmental sustainability” (United Nations Development Programme 2022). The SDGs also recognise that “ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth—all while tackling climate change and working to preserve our oceans and forests.” (United Nations Department of Economic and Social Affairs 2022). Within the SDGs framework, sustainability appears as a goal whose definition is taken for granted and, effectively, conflated with that of ‘sustainable development.’ Interestingly, the three pillars of sustainability grow in complexity within the SDGs. The SDGs’ specificity means that several potential facets of the three-pillar framework are investigated, with particular emphasis on health and poverty. As for health, goals 3 and 6 are very relevant. Goal 3, specifically, highlights how “Ensuring healthy lives and promoting well-being at all ages is essential to sustainable development” (United Nations Sustainable Development Goals 2022).

1.2 COVID-19, Sustainability, and the UN

The UN highlights the impact of COVID-19 on sustainable development. In March 2020, a UN Report on the socio-economic impacts of the syndemic stated that “The COVID-19 crisis is likely to have a profound and negative effect on sustainable development efforts” and that it would adversely affect the 2030 Agenda for Sustainable Development (United Nations Executive Office of the Secretary-General, EOSG, 2020). The ways in which COVID-19 impacts both policies and discourses of sustainability is connected with the conflation of sustainability and sustainable development, and with that of sustainable development with the conceptualisation of SDGs. Some SDGs are particularly at risk as the syndemic has hit vulnerable groups (e.g. ethnic minorities, children and the elderly, women, the underprivileged), impacted the environment in the long term through diversion of funding from the development of clean energy to emergency measures to combat the spread and effects of the virus. Furthermore, COVID-19 has undermined social cohesion (e.g. impacts on wellbeing and mental health, stigmatisation of groups wrongly considered responsible for the spread of the virus, worsening of socio-economic inequalities, slowdown of election processes). The Office of the High Commissioner for Human Rights (OHCHR) confirms that COVID-19 has “undermined the progress made on sustainable development” (OHCHR 2020).

SDG 3 (Good Health and Well-being), for instance, is described in terms of the connection with the COVID-19 global health crisis, acknowledging that “emergencies such as COVID-19 pose a global risk and have shown the critical need for preparedness” (United Nations Sustainable Development Goals – Health 2022). More than that, COVID-19 has highlighted the pressing

need for the achievement of health equality, as there are “huge disparities in countries’ abilities to cope with and recover from the COVID-19 crisis” (United Nations Sustainable Development Goals – Health 2022). Other SDGs are presented in terms of the ways COVID-19 has impacted them and complicated the progress towards their achievement: for instance, SDG 2 (Zero Hunger) is pitted against the stark reality of the syndemic, as “Conflict, COVID-19, climate change and growing inequalities are converging to undermine food security worldwide” (United Nations Sustainable Development Goals – Zero Hunger 2022). SDG 10 (Reduce Inequalities) addresses the syndemic-induced rise in between-country income inequality (United Nations Sustainable Development Goals – Reduce Inequalities 2022).

While the relationship between sustainability (sustainable development) and COVID-19 is framed as disruptive (i.e. the syndemic has disrupted, slowed down, and sometimes halted efforts towards sustainability in its diverse SDGs incarnations), the UN is increasingly representing the recovery from the syndemic as a time of opportunity. In the words of the UN Secretary General, recovery must be turned into “a real opportunity” (United Nations Sustainable Development Goals 2022). Therefore, SDGs have come to be presented as a framework for COVID-19 recovery, a set of clear targets and guidelines (United Nations Sustainable Development Goals 2022). An interesting suggestion here, which unfortunately lies beyond the scope of the present work, is the fact the COVID-19, too, is mostly read and narrated in terms of the economy (especially the loss of capital and jobs; the slowdown of production and sales; the impact on retail and price surges, etc.).³

2. The Corpus

In order to assess whether the press registers and consequently communicates a connection between COVID-19 and sustainability, and whether it reflects definitions of sustainability (sustainable development) established by the UN, and their incongruities and ambiguities, the Coronavirus Corpus, available online, has been interrogated. The corpus contains about 1552 million words and grows by 3-4 million words each day; these are found in online newspapers and magazines from 20 English-speaking countries, ranging from January 2020 until now.⁴ It was first released in May 2020. As a subset of the NoW (News on the Web) Corpus, it contains articles connected with Coronavirus, sourced according to two criteria:

³ Proof of the conflation of COVID-19, the economy and sustainability is visible, for instance, in the special issue of the *Sustainability* journal, titled “The Impact of COVID-19 on Sustainable Economy” (2022).

⁴ For more information regarding selection criteria for the news outlets and the English-speaking countries involved see Davis (2021).

1. Articles with at least three occurrences of the words (*coronavirus*, *COVID*, or *COVID-19*).
2. Articles with one of the following words/strings in the title: “at-risk, cases, confirmed, contagious, containm*, coronavirus, covid*, curbside, curve, deaths, disinfect*, distanc*, epicenter, epidemic, epidemiol*, flatten*, flu, high-risk, hoard*, hospital*, hydroxychloroquine, infect*, influenza, isolat*, lockdown, lock-down, mask*, nursing, outbreak, pandemic, panic, patient*, pneumon*, preventative, preventive, quarantin*, re-open*, reopen*, respiratory, sanitiz*, self-isolat*, shelter*, shutdown, spread, spreading, stay-at-home, stay at home, stockpil*, testing, vaccine*, ventilator*, virus” (Davis 2021).

The phrases and combinations selected for analysis are as follows:

- *Sustainable COVID-19*
- *COVID-19 sustainable*
- *Sustainability and COVID-19*
- *Sustainability COVID-19*
- *COVID-19 and sustainability*
- *COVID-19 sustainability*
- *Sustainable development and COVID-19*
- *COVID-19 and sustainable development*

These are not interrogated in terms of collocation studies and are not read as either strong or weak collocations, but merely as co-occurrences. The aim is to analyse what semantic and thematic reverberations the co-occurrence triggers.

The Coronavirus Corpus contains both basic and advanced search options; the data can be filtered according to frequency (i.e. number of occurrences in the corpus) and context (i.e. keyword in context). The context function allows for further analysis through the save, translate, and analyze options: save helps create customised frequency lists according to the research question; ‘translate’ redirects to Google Translate for a basic (and obviously rather approximate) translation of a given occurrence, the analyze option redirects to the COCA (Corpus of Contemporary American English) in order to look at collocation data and statistics, the function is consequently not relevant to the analysis of the Coronavirus corpora.

Once the KWIC function has been selected, data are presented by reporting the date of

occurrence, the source, the country from which the source originates, and the actual occurrence within its context. A collocation option is available; it allows for a flexible collocation window (Brezina, McEnery, and Wattam 2015, 140), 1 to 4 collocates to the left and to the right of the node. The default setting is 4 collocates to the left and to the right. Since collocational patterns are beyond the scope of the present work, the option has not been used.

3. The Analysis

The criteria for the selection of texts in the Coronavirus Corpus and the keywords in article titles listed as inclusion criteria do not include *sustainable*, *sustainable development*, or *sustainability*, but a preliminary search in the corpus in the timespan ranging from 1 January 2020 to 30 September 2022 yields the following results:

- the adjective *sustainable* occurs 91467 times: in 13913 occurrences, *sustainable* collocates with *development*; in 6056, it collocates with *growth*; in 4921, with *goals*; in 3426 with *future*—these data seem to be in line with the institutional discourse of sustainability detailed above;
- the noun *sustainability* occurs 39381 times; its top 4 lexical-word left collocates are: *environmental* (1689 occurrences), *economic* (1501 occurrences), *ensure* (1189 occurrences), *long-term* (1115 occurrences)—these data indicate the lexical presence of two of the three pillars (and of the connected incongruity inherent in UN sustainability discourses), but also the ideas of sustainability as a long-term project and as something that must be “ensured.”

The discourse of sustainability thus appears to be an element in COVID-19-related discussions and news in the online press. By narrowing the scope of the search and drawing a closer connection between COVID-19 and sustainability, results become more telling.

3.1 Sustainable COVID-19, COVID-19 sustainable

These are the numbers for the co-occurrence of the adjective *sustainable* and the noun *COVID-19* in the timespan from 1 January 2020 to 30 September 2022:

- *Sustainable COVID-19*: 27 occurrences (Figure 1)

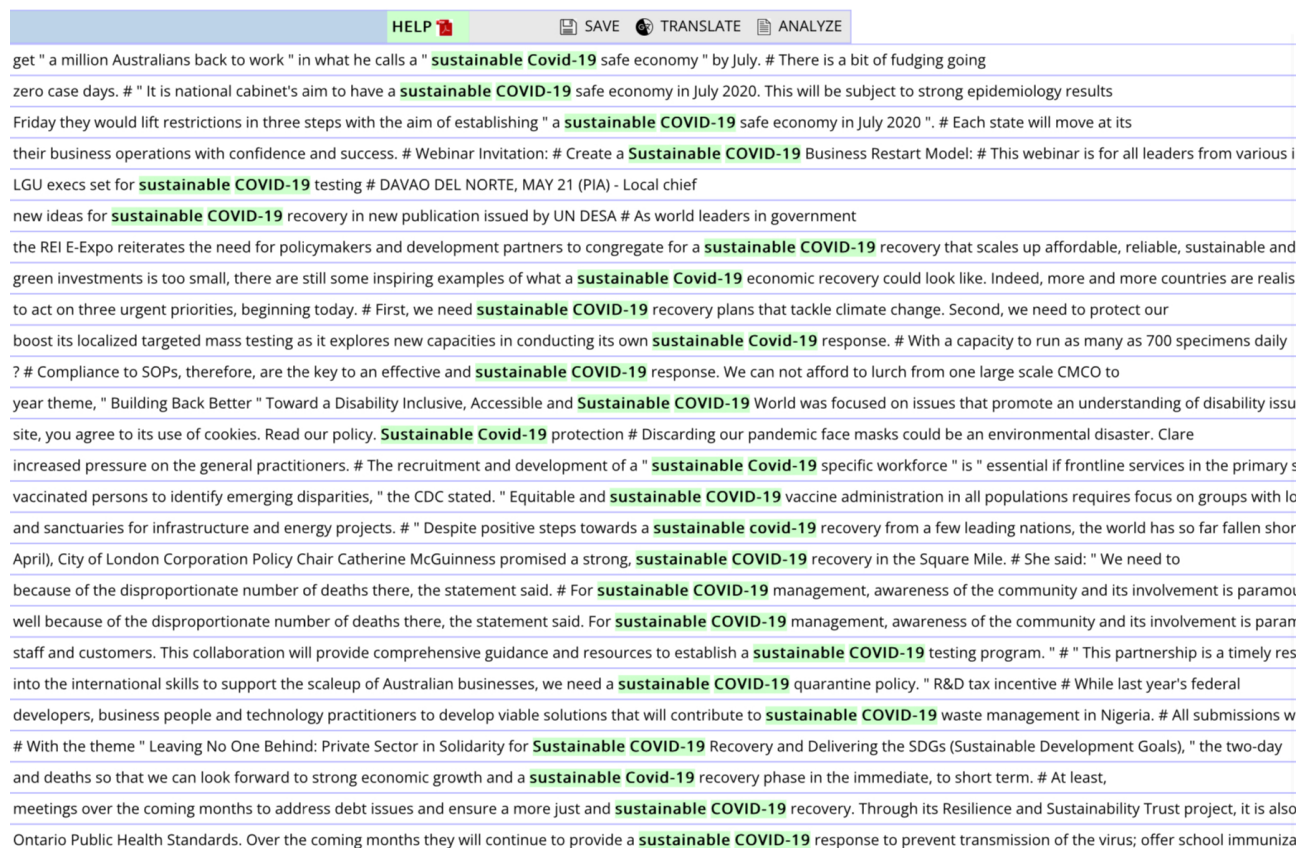


Fig. 1: KWIC Search Results for *Sustainable COVID-19*⁵

The data in figure 1 (*sustainable COVID-19*) show that both ‘sustainable’ and ‘COVID-19’ act as premodifiers in noun phrases (see Mattiello 2022, 2). In particular, in 6 cases, *sustainable* qualifies the compound noun *COVID-19 recovery*. In 3 instances, *recovery phase*, *recovery plans* and *economic recovery* are premodified by both *sustainable* and *COVID-19*. Other instances show *sustainable* and *COVID-19* premodify *response*, *testing*, *vaccine administration*, *economy*, *management* and *waste management*, for instance. The semantics of *sustainable* are often not easily deduced from co-text. Except for occurrence 24 (“Private Sector in Solidarity for Sustainable COVID-19 Recovery and Delivering the SDGs”), in which *sustainable* and *COVID-19* are both used in the context of the UN SDGs; other occurrences prove less transparent.

Efforts to suss out the semantics of *sustainable* in conjunction with *COVID-19* have required wider context than the co-text the basic corpus search allows for. The Coronavirus Corpus contains hypertextual sources for each occurrence of the search word or search string: by clicking on the newspaper or magazine name, it is possible to be redirected to the original article the instance comes from. Using this option offers semantic clarification. Two examples are

⁵ www.english-corpora.org/corona/. Last visited 17/10/2022.

presented here: occurrences 1 to 3—“sustainable COVID-19 safe economy”—can be contextualised in Australian political discourse. More specifically, these are the words spoken by Prime Minister Scott Morrison, reported by different news outlets, and they concern governmental efforts to flatten the curve of job losses starting in May 2020, other than that of COVID-19-related deaths. Further investigation shows that COVIDSafe is the contact tracing app used in Australia during the most severe phases of the syndemic. Within this socio-political context, the 3 occurrences above appear more intelligible: the head noun in the phrase is *economy*, *COVID-19 safe*—even without a hyphen—appears to be a compound adjective directly premodifying *economy*, and *sustainable* is a further modifier of *economy*. The economic repercussions of the syndemic have been severe, so the Australian Prime Minister wishes to get the economy up and running by July 2020 (Packham 2020): the economy has to be both safe from COVID-19 and sustainable. In this context, a sustainable economy does not refer to the SDGs, specifically, but rather to the Australian economy’s ability to restart and the country’s workforce’s ability to support themselves during the health emergency. In line with Salazar’s analysis of the “epistemology of progress” view of sustainability, these occurrences foreground sustainable as synonymous with economically viable.

Occurrences 5 and 20 are concerned with *COVID-19 testing* and a *COVID-19 testing program*. These are novel compounds with a very strong degree of lexicalisation (Vogel and Scalise 1982); in fact, *COVID-19 test* is listed in OED as one of the common compounds of the noun *COVID-19* in the eponymous entry. The adjective *sustainable* is here not necessarily related to the institutional discourse of sustainability, but, in occurrence 20 for instance, it is connected with the actual logistical implementation of a testing programme, the availability of tests, and the evidence-based support businesses and educational facilities need in order for testing programmes to be sustainable in the general acceptance of “able to be maintained” (OED 2022).

- *COVID-19 sustainable*: 3 occurrences (Figure 2)

	+CONTEXT	HELP
1	20-06-10 ZA businesslive.co.za	# " Towards an SACP Strategic Perspective on a Post Covid-19 Sustainable Recovery and Development Programme ". 61918817 #
2	21-03-09 GB proactiveinvestors.co.uk	#landlords on creating solutions that make centres impacted by COVID-19 sustainable for both parties. We made good progress in this area during the year
3	21-03-15 ZA moneyweb.co.za	#the group on a solid footing for a post Covid-19 sustainable recovery, " he noted. # " We worked hard to reduce costs

Fig. 2: KWIC Search Results for *COVID-19 Sustainable*⁶

The *COVID-19 sustainable* search string (Figure 2) occurs 3 times in the corpus: in occurrences

⁶ www.english-corpora.org/corona/. Last visited 17/10/2022.

1 and 3, COVID-19 is part of the modifier *post COVID-19*, in both cases this modifies the head noun *recovery*. *Sustainable* also modifies the noun *recovery*. The semantics of *sustainable* refer to the implementation of recovery: firstly, recovery is framed as something that chronologically follows the syndemic, it is *post-COVID 19*; its designation as *sustainable* might refer to the measures to be implemented in terms of health and economic policies so as to make recovery viable. But *recovery* remains a conveniently polysemous term in COVID-19 discourses, semantically dependent on the producer of the message, and containing the potential for economic, environmental, and health semantics, but not necessarily a clearly defined referent.

3.2 Sustainability and COVID-19, sustainability COVID-19, COVID-19 and sustainability, and COVID-19 sustainability

These are the numbers for the co-occurrence of the noun *sustainability*, the conjunction *and*, and the noun *COVID-19* in the timespan from 1 January 2020 to 30 September 2022:

- *Sustainability and COVID-19*: 4 occurrences (Figure 3).

1	20-04-16 NG	proshareng.com	earlier this month paid out \$116 million in dividends. Source CFI.co Read More # Sustainability and COVID-19: Accountabili
2	20-04-23 NG	proshareng.com	. I Understand. Got It. 51633480 Sustainability and COVID-19
3	20-07-02 US	Milwaukee Journal Sentinel	to its Facebook post, organizers decided to permanently close the market because of low sustainability and COVID-19 conc
4	21-05-30 PH	bworldonline.com	issues to strengthen trust with the next generation of clients. # PROVIDING LEADERSHIP ON SUSTAINABILITY AND COVID-1

Fig. 3: KWIC Search Results for *Sustainability and COVID-19*⁷

Occurrences 1 and 2 are hashtags, their source a Nigerian financial consulting service. The status of hashtags as social metadata, their function as topic markers and their value as facilitators of web searches (Zappavigna 2015) makes them interesting as examples of the grammatical conjunction of sustainability and COVID-19. More than that, the two lexical items used as hashtags function as a sort of binomial, whereby their deep-rooted connection is predicated. The thematic context being financial markets, both *sustainability* and *COVID-19* are read, once again, in economic terms.

Occurrence 3 concerns the shutdown of the Sussex farmers market in Wisconsin in July 2020 due to low sustainability and COVID-19. The connection between sustainability and the syndemic is, in fact, a causal one: the impossibility to keep the market running—one learns reading further—is due to health and safety measures to contain the spread of the virus, which, in turn, makes running the market impossible to sustain economically (Kozłowicz 2020).

⁷ www.english-corpora.org/corona/. Last visited 18/10/2022.

Occurrence 4, too, concerns the economy, corporate banking in particular, and the efforts banks can make to facilitate growth in a post-syndemic world: accounting firm SGV advocates for environmental, social and governance (ESG) investments in order to make sustainability more than a branding exercise and to create real value for businesses after COVID-19.⁸

- *Sustainability COVID-19*: 1 occurrence (Figure 4)

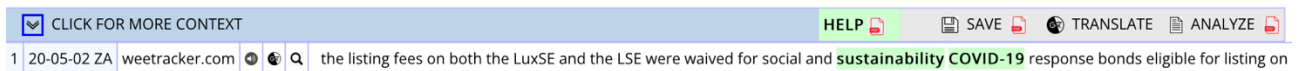


Fig. 4: KWIC Search Results for *Sustainability COVID-19*⁹

Figure 4 shows that the context for the 1 occurrence of *sustainability and COVID-19* is financial. *COVID-19* premodifies both *response* and *bonds*. The wider co-text concerns the African Development Bank's issuing of social bonds in order to support African economies at a time of syndemic crisis; sustainability is thus contextualised once more in economic terms, but the social component is mentioned as well, positioning this one occurrence well within the institutional discourse of sustainability and the three-pillar framework. In particular, the relevant focus here is on how the syndemic crisis has impacted society through shocks to the economy.

- *COVID-19 and Sustainability*: 1 occurrence (Figure 5)

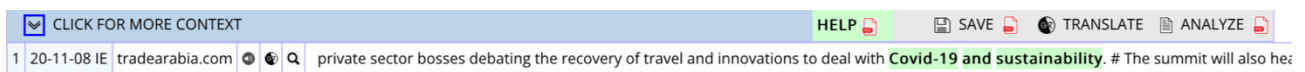


Fig. 5: KWIC Search Results for *COVID-19 and Sustainability*¹⁰

Figure 5 shows 1 occurrence juxtaposing *COVID-19* and *sustainability* in the context of tourism, and the recovery of the tourism industry from the first dramatic syndemic year. The connection between sustainability and tourism predates the syndemic and is threefold: environmental, economic and cultural. The syndemic has gravely hit the tourism industry. The connection is therefore economic, on the one hand, and environmental, on the other (reminiscent of SDGs 7, 11, 15): discussing the future of tourism at the time of COVID-19 means talking about the

⁸ [https://www.sgv.ph/c-suite/Corporate-Banking-Circa-2030:-7-hypotheses-\(Second-part\)](https://www.sgv.ph/c-suite/Corporate-Banking-Circa-2030:-7-hypotheses-(Second-part)). Last visited 17/10/2022.

⁹ www.english-corpora.org/corona/. Last visited 17/10/2022.

¹⁰ www.english-corpora.org/corona/. Last visited 17/10/2022.

impact the syndemic has had on the industry and suggesting a viable way out, as well as bringing the need for environmentally friendly and eco-system respectful ways of travelling and exploring the globe back to the fore of discussion.

- *COVID-19 Sustainability*: 5 occurrences (Figure 6)

	+CONTEXT	HELP
1	20-05-23 NG channelstv.com	#include advice on strategic measures that will ensure post COVID-19 sustainability of the industry. # She gave an assurance that the State will not
2	21-01-26 NG nairametrics.com	#Recovery and Growth Programme (ERGP) and Post COVID-19 sustainability Plan. # " It is only deliberate deployment of Engineering, Science,
4	21-01-29 NG sundiatapost.com (1)	#, Economic Recovery and Growth Programme and post COVID-19 sustainability plan. # " It is only deliberate deployment of Engineering, Science,
5	21-03-24 NG herald.ng	#sectors of the economy due attention for their post COVID-19 sustainability , our elder statesmen and women also deserve due attention. # " Apar
6	22-03-25 US forbes.com	#term, we suspect investor focus will remain on Covid-19 sustainability . " Key Background # Covid-19 vaccines have proven to be highly effective

Fig. 6: KWIC Search Results for *COVID-19 Sustainability*¹¹

Figure 6 shows the occurrences of the *COVID-19 sustainability* string, in which *COVID-19* premodifies *sustainability*. In 2 out of 5 occurrences, *sustainability* is part of the compound *sustainability plan*. In 4 out of 5 occurrences *COVID-19* is combined with the prefix *post-* to form an adjective. The term *sustainability* is thus deployed as the enactment of a process specific to a post-*COVID-19* scenario. The thematic background to the 5 occurrences of *COVID-19 sustainability* is the economy: in occurrence 1, *post COVID-19 sustainability* refers to the tourism *industry*; in occurrences 2 and 3, the reference is to the Nigerian *Economic Recovery and Growth Programme*, which the *post COVID-19 sustainability plan* complements, this connects sustainability to discourses of recovery and growth (NOT development), and therefore connects it to the economic pillar of the three-pillar framework. In occurrence 4, sustainability is connected to *sectors of the economy* which require attention in terms of sustainability in the post *COVID-19* phase. This could refer to economic support of specific sectors of the economy and the people working in them, or it might refer to increased attention to the SCR of specific economic sectors. In occurrence 5, the reference is to investments in Moderna vaccines and whether high revenue expectations are realistic in the long term; thus, sustainability is here intended in terms of money invested and money to be gained.

3.3 Sustainable development and COVID-19, COVID-19 and sustainable development

No occurrences are recorded for *sustainable development and COVID-19*, while the corpus contains 3 occurrences of *COVID-19 and sustainable development* (Figure 7).

¹¹ www.english-corpora.org/corona/. Last visited 17/10/2022.

CLICK FOR MORE CONTEXT		HELP	SAVE	TRANSLATE	ANALYZE
1	21-01-05 US	ndtv.com			and the green earth. # Noting there was a direct link between COVID-19 and Sustainable Development Goal (SDG) of wellbeing and health
2	21-04-13 IN	heraldgoa.in			article, I will cover the socio political and the economic responses to COVID-19 and sustainable development . The Covid-19 was sought to
3	21-06-25 KE	ReliefWeb			It also outlines a suggested path forward for integrated approaches to migration, COVID-19 and sustainable development that rests on c

Fig. 7: KWIC Search Results for *COVID-19 and Sustainable Development*¹²

In occurrence 1, the connection between the search string and the UN's SDGs is clearly drawn, in particular the connection between the syndemic and SDG 3 (health and well-being); the wider co-text is that of environmental deterioration and how the first wave of the syndemic improved air quality. In occurrence 2, the connection is drawn between COVID-19 and the implementation of sustainable development strategies. In occurrence 3, the impact of COVID-19 on migration is discussed; and the connection between them and sustainable development is drawn. The UN is directly mentioned in occurrence 3.

The *COVID-19 and sustainable development* string appears to be firmly rooted in institutional sustainability discourse and the 2030 Agenda. This shows how the collocation *sustainable development* has been successfully integrated into the establishment discourse of sustainability and how it has come to be inextricably connected with the UN's SDGs. In this scenario the COVID-19 syndemic is framed as a cause for disruption and a force to be reckoned with through policymaking.

4. Results and Conclusion

This article has, firstly, investigated the institutional discourse of sustainability (the UN) from a definitional perspective, i.e. in terms of a viable definition of sustainability to be found in glossaries and official documents; secondly, it has examined the connection between COVID-19 and the UN's Sustainable Development Goals (SDGs), and, thirdly, it has interrogated the Coronavirus Corpus through a set of search strings in order to assess whether the online press—as reflected in the Coronavirus Corpus—shows a connection with the institutional discourse of sustainability, its incongruities, and the impacts of the COVID-19 syndemic on sustainable development.

Definitions of sustainability found in the UN's Brundtland report and SDGs website are shown to be conceptualised in terms of sustainable development and the three pillars of sustainability framework. Connections between COVID-19 and SDGs are drawn by the UN with a focus on the detrimental effects of the syndemic on governmental efforts towards sustainability, in

¹² www.english-corpora.org/corona/. Last visited 17/10/2022.

particular in developing contexts, but with an emphasis on the opportunity for a fresh (improved) start on the path to the 2030 goals of sustainability.

The analysis of the Coronavirus Corpus was based on the set of search strings listed below:

- *Sustainable COVID-19*
- *COVID-19 sustainable*
- *Sustainability and COVID-19*
- *Sustainability COVID-19*
- *COVID-19 and sustainability*
- *COVID-19 sustainability*
- *Sustainable development and COVID-19*
- *COVID-19 and sustainable development*

The mere co-occurrence of the elements in the search strings, and the thematic connections and semantic reverberations these entail, have been the focus of the analysis. Collocations and collocational patterns were not taken into consideration.

The last two search strings in the list (*Sustainable development and COVID-19*, *COVID-19 and sustainable development*) show a clear connection with the UN's SDGs. This has been interpreted as inherent in the use of the compound noun *sustainable development*, an effective shorthand for the institutional discourse on sustainability.

The remaining six search strings have yielded different results. On the one hand, the Coronavirus Corpus has shown how, beyond the institutional discourse of sustainability as embodied by the SDGs, discourses of sustainability multiply: for instance, sustainability in the context of banking and finance lies beyond the scope of SDG 8 (decent work and economic growth) and is more connected with Social Corporate Responsibility (SCR) and environmental, social, and governance (ESG) investments. In the context of tourism, sustainability is an expression of the three-pillar framework, but losses and plans for recovery are framed in purely economic terms. The analysis of the corpus has further evidenced how the connection between COVID-19 and sustainability is framed in terms of the severe economic impact the syndemic has had on businesses and job losses. This appears to be in line with scholarly work discussing the incongruity in the epistemological foundations of UN definitions of sustainability (Salazar 2018), and with critique of the three-pillar framework, which appears to simplistically include environmental and social variables within the dominant economic system (James 2015).

The online press, as represented in the Coronavirus Corpus, registers the detrimental economic

effects of COVID-19, therefore frames sustainability as primarily an economic issue. While the UN also addresses the economic impact of the syndemic, it further identifies COVID-19 as impairing long-term policy-making and financial investment in the pursuit of the 17 SDGs. This discrepancy may be due in part to the difficult definition of sustainability, and the ontological ambiguity it appears to entail (Salazar 2018); it can further be ascribed to the quasi-synonymous use of sustainability and sustainable development in the UN sources here presented. The effects of COVID-19 on economic sustainability and on many countries' ability to follow the path to 2030 and the Agenda for Sustainable Development remain a fact. So does the presence in the Coronavirus Corpus of a connection between COVID-19 and sustainability that seems to hinge mostly on the economy.

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